



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/828,751	04/21/2004	Chuck Price	P00924-US-01 (06579.9374)	5494
22446 7590 03/29/2007 ICE MILLER LLP ONE AMERICAN SQUARE, SUITE 3100 INDIANAPOLIS, IN 46282-0200			EXAMINER NORTON, JENNIFER L	
			ART UNIT 2121	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			MAIL DATE	DELIVERY MODE
3 MONTHS			03/29/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/828,751	PRICE ET AL.	
	Examiner	Art Unit	
	Jennifer L. Norton	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-20 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6,9-20 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following is a **Non-Final Office Action** in response to the Request for Continued Examination filed on 15 March 2007. Claims 1-3, 5, 6, 10, 12-20 and 25 have been amended. Claims 7, 8, 21-24 and 26-28 have been previously cancelled. Claims 1-6, 9-20 and 25 are pending in this application.

Drawings

2. The drawings are objected to because element 440 in Fig. 6 as described in the specification is labeled as reference character 41 in Fig. 6. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

Art Unit: 2121

informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The Examiner notes the Applicant's submission of Replacement Drawings for Figures 1-25.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. - Claims 1-5, 11-15, 18 and 19 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent Publication No. 2003/0150909 (hereinafter Markham).

3. As per claim 1, Markham discloses a method of monitoring and controlling a manufacturing process to enable at least one manufactured product to meet at least one specification, the method comprising the steps of:

providing at least one key process indicator (KPI) dashboard (pg. 4, par. [0049]) with a statistical process control (SPC) subsystem (pg. 9, par. [0116]), pg. 20, par.

Art Unit: 2121

[0206] and pgs. 23-24, par. [0228]) for at least one manufacturing sub-process (pg. 2, par. [0035]);

automatically collecting (pg. 8, par. [0096], pg. 9, par. [0116], pg. 20-21, par. [0206]-[0207] and pg. 23-24, par. [0226] and [0228]) product specific data (pg. 1, par. [0012]) from the manufacturing sub-process (pgs. 21-22, par. [0212]) through at least one data collecting apparatus as a function of time (pg. 2, par. [0035], pg. 6, par. [0074] and pg. 22, par. [0214]);

storing said product specific data in at least one database (pg. 3, par. [0039] and Fig. 2, element 70)

setting at least one specification for the at least one product and the at least one manufacturing sub-process (pg. 17, par. [0183]);

accessing the at least one database with the KPI dashboard (pg. 2, par. [0035], pg. 3, par. [0039] and pgs. 19-20, par. [0200]);

utilizing the SPC subsystem to set at least one alarm (pg. 5, par. [0058] and pg. 6, par. [0064]) for the at least one product and the at least one manufacturing sub-process (pg. 8, par. [0008] and pgs. 30-31, par. [0280]); and

comparing the product specific data with the at least one alarm (pg. 5, par. [0058] and pg. 6, par. [0064]) and/or the at least one specification and notifying at least one user in real time when the product specific data triggers the at least one alarm and/or the at least one specification (pg. 6, par. [0064], pgs. 19-20, par. [0200] and [0203] and pgs. 30-31, par. [0280]).

4. As per claim 2, Markham discloses collecting and storing product specific data steps comprise automatically collecting and storing first product specific data in the at least one database (pg. 7, par. [0083], pg. 9, par. [0116], pg. 16, par. [0175] and pg. 20, par. [0206]) and manually collecting and storing at least one piece of second product specific data in the same at least one database (pgs. 6-7, par. [0077] and pg. 9, par. [0119]).

5. As per claim 3, Markham discloses the step of storing product identifying data (pg. 17, par. [0183]) and manufacturing plant specific data (pg. 17, par. [0178]) together in the at least one database (pg. 20, par. [0201] and pg. 26, par. [0244] and [0245]).

6. As per claim 4, Markham discloses the step of allowing the user to select at least one manufacturing sub-process through the KPI dashboard (pgs. 26-27, par. [0251]).

7. As per claim 5, Markham discloses automatically collecting (pg. 8, par. [0096], pg. 9, par. [0116], pg. 20-21, par. [0206]-[0207] and pg. 23-24, par. [0226] and [0228]) and storing the product specific data steps comprise collecting and storing at least one measure specific to the at least one selected manufacturing sub-process that enables the manufactured product to meet the at least one specification (pg. 26, par. [0245]).

8. As per claim 11, Markham discloses the step of generating at least one report based on the product specific data stored in the at least one database (pgs. 26-27, par [0251]-[0253]).

9. As per claim 12, Markham discloses a method of monitoring at least one manufacturing process for at least one manufacturing plant, the method comprising the steps of:

entering product identifying data for at least one product into a first data entry field (pg. 17, par. [0183]);

entering manufacturing plant specific data into a second data entry field (pg. 17, par. [0178] and [0179]);

assigning at least one data collecting apparatus to at least one manufacturing sub-process that produces the at least one product (pg. 17, par. [0184]);

automatically collecting (pg. 8, par. [0096], pg. 9, par. [0116], pg. 20-21, par. [0206]-[0207] and pg. 23-24, par. [0226] and [0228]) first product specific data with the at least one collecting data apparatus from the at least one manufacturing sub-process as a function of time (pg. 26, par. [0245]); and

storing the product identifying data, the plant specific data and the first product specific data together in at least one database (pg. 20, par. [0201] and pg. 26, par. [0244] and [0245]).

10. As per claim 13, Markham discloses the step of manually collecting second product specific data from the at least one product and entering the data (pgs. 6-7, par. [0077] and pg. 9, par. [0119]) in the same at least one database that stores the product identifying data, the plant specific data and the first product specific data (pg. 20, par. [0201] and pg. 26, par. [0244] and [0245]).

11. As per claim 14, Markham discloses the step of setting at least one range of specifications for the first product specific data (pg. 17, par. [0183]).

12. As per claim 15, Markham discloses the step of notifying the user in real time when the first product specific data falls outside the at least one range of specifications (pg. 6, par. [0064], pgs. 19-20, par. [0200] and [0203] and pgs. 30-31, par. [0280])

13. As per claim 18, Markham discloses the step of generating at least one report from the product identifying data, the plant specific data, the automatically collected (pg. 8, par. [0096], pg. 9, par. [0116], pg. 20-21, par. [0206]-[0207] and pg. 23-24, par. [0226] and [0228]) first product specific data, and the second product specific data stored in the same at least one database (pgs. 26-27, par [0251]-[0253]).

14. As per claim 19, Markham discloses the step of enabling at least one user to access the at least one database in order to track the at least one product through at

Art Unit: 2121

least one step of the at least one manufacturing sub-process (pgs. 26-27, par. [0251]-[0253]).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 6, 9, 10, 16, 17, 20 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Publication No. 2003/0150909 (hereinafter Markham).

As per claim 6, Markham teaches the setting of the at least specification step comprises setting at least one range of specifications for the at least one measure (pg. 17, par. [0183]) and the setting of the at least one alarm step (pg. 5, par. [0058] and pg. 6, par. [0064]).

Markham does not expressly teach the setting at least one range of alarms for the measure.

Spriggs teaches to setting a range of alarms (col. 10, lines 1-2 and 22-30).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Markham to include setting a range of alarms to reduce operating costs, provide fewer and less severe failures and better production availability (col. 1, lines 35-46 and col. 2, lines 27-38).

17. As per claim 9, Markham teaches as set forth above the step of entering into the at least one database a reason for the collected measure falling outside of the at least one range of alarms and/or specifications (pg. 8, par. [0093], [0096] and [0102] and pg. 9, par. [0119]).

18. As per claim 10, Markham teaches as set forth above the step of entering a corrective action into the at least one database, which was taken to prevent the at least one measure from falling outside of the at least one range of alarms and/or specifications (pg. 9, par. [0119]).

19. As per claim 16, Markham teaches to the step of setting at least one alarm (pg. 5, par. [0058] and pg. 6, par. [0064]).

Markham does not expressly teach the step of setting at least one alarm within the at least one range of specifications.

Spriggs teaches the step of setting at least one alarm within the at least one range of specifications (col. 10, lines 1-2 and 22-30).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Markham to include the step of setting at least one alarm within the at least one range of specifications to reduce operating costs, provide fewer and less severe failures and better production availability (col. 1, lines 35-46 and col. 2, lines 27-38).

20. As per claim 17, Markham teaches as set forth above the step of notifying the user in real time when the first product specific data triggers the alarm (pg. 6, par. [0064], pgs. 19-20, par. [0200] and [0203] and pgs. 30-31, par. [0280]).

21. As per claim 20, Markham teaches a method of allowing a user to access a plant management database and configure and manipulate the data stored therein, the method comprising:

providing at least one piece of manufacturing equipment capable of producing at least one product (pg. 23, par. [0227]);

collecting automatically (pg. 8, par. [0096], pg. 9, par. [0116], pg. 20-21, par.

Art Unit: 2121

[0206]-[0207] and pg. 23-24, par. [0226] and [0228]) a first product specific data from the at least one piece of manufacturing equipment as a function of time (pg. 7, par. [0083], pg. 9, par. [0116], pg. 16, par. [0175] and pg. 20, par. [0206]);

entering manually second product specific data for the at least one product produced from the manufacturing equipment (pgs. 6-7, par. [0077] and pg. 9, par. [0119]);

setting at least one range of specifications (pg. 17, par. [0183]) and at least one alarm for the at least one product (pg. 5, par. [0058] and pg. 6, par. [0064]); and

storing the first product data, the second product specific data, the at least one range of specifications, and the at least one alarm together in the same at least one database (pg. 20, par. [0201] and pg. 26, par. [0244] and [0245]); and

comparing the first product specific data with the second product specific data to the at least alarm (pg. 5, par. [0058] and pg. 6, par. [0064]) and/or the at least one range of specifications and notifying at least one user in real time when the first product specific data and/or the second specific product data falls outside of the at least alarm and/or the at least one range of specifications (pg. 6, par. [0064], pgs. 19-20, par. [0200] and [0203] and pgs. 30-31, par. [0280]).

Markham does not expressly teach to setting a range of alarms.

Spriggs teaches to setting a range of alarms (col. 10, lines 1-2 and 22-30).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant's invention to modify the teaching of Markham to include setting a range of alarms to reduce operating costs, provide fewer and less severe failures and better production availability (col. 1, lines 35-46 and col. 2, lines 27-38).

22. As per claim 25, Markham teaches as set forth above the step of generating at least one report based on the first product specific data and/or the second product specific data stored in the at least one database (pgs. 26-27, par. [0251]-[0253]).

Response to Arguments

23. Applicant's arguments see Remarks pgs. 11-12, filed 15 March 2007 with respect to claims 12-15, 18 and 19 under U.S.C. 102(e) have been fully considered but they are not persuasive.

24. Applicant's arguments see Remarks pgs. 12-13, filed 15 March 2007 with respect to claims 6, 9, 10, 16, 17, 20 and 25 under U.S.C. 103(a) have been fully considered but they are not persuasive.

25. Applicant's arguments see Remarks pgs. 12-13, filed 15 March 2007 with respect to claims 1-5 and 11 under U.S.C. 103(a) have been considered but are moot in view of the new ground(s) of rejection.

26. In response to the Applicant's argument that the prior art does not teach "collecting first product specific data...as a function of time" in claims 1, 12 and 20, and "automatically collecting a first product specific as a function of time" in claims 1 and 20; the Examiner respectfully disagrees.

The limitations "collecting first product specific data...as a function of time" and "automatically collecting a first product specific as a function of time" are newly presented by the Applicant in the Request for Continued Examination filed on 15 March 2007, and has been rejected as set forth above.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following references are cited to further show the state of the art with respect to a plant management system.

U.S. Patent No. 5,339,257 discloses a system for real time monitoring a multiparameter manufacturing process.

U.S. Patent No. 6,477,437 discloses an assembly work support system.

U.S. Patent No. 6,512,986 discloses a computer-implemented method to process POC information for potential QC compliance issues.

U.S. Patent No. 5,311,759 discloses a method and system for monitoring the operation of a stamping press.

U.S. Patent No. 3,946,212 discloses an automatic quality control system for a machine which measures workpieces processed by the machine.

U.S. Patent No. 5,257,206 discloses a statistical process control system for an air-separation plant.

U.S. Patent No. 5,631,825 discloses an operator station for a manufacturing process control system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer L. Norton whose telephone number is 571-272-3694. The examiner can normally be reached on 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight can be reached on 571-272-3687. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Anthony Knight
Supervisory Patent Examiner
Art Unit 2121